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## **Sterrekundig Instituut Utrecht: The Last Years**

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**Abstract.** I describe the last years of the 370-year long life of the Sterrekundig Instituut Utrecht, which was the second-oldest university observatory in the world and was closed in early 2012 after the Faculty of Science and the Board of Utrecht University decided, without providing qualitative or quantitative arguments, to remove astrophysics from its research and education portfolio.

### **1. Good Times**

#### **1.1. Difficult Start for the New Faculty of Science**

In November 2007, Alfred Blik became the new dean of the Science Faculty of Utrecht University, a dean who turned out to be a strong supporter of astronomy. The merging of different departments into the new Science Faculty a few years earlier had led to financial difficulties because some departments brought very substantial, structural deficits into the new faculty, thereby impacting other, well-funded departments. Despite being financially sound and having substantial reserves before the merge, the Physics & Astronomy department had gotten under financial pressure and was forced to lay off some staff. No SIU staff was laid off. The reserves had been blocked by the university board and directly or indirectly used to cover the deficits of other departments. During these insecure times, Norbert Langer, then director of SIU, won a prestigious Alexander von Humboldt Professorship and departed at the end of 2008 for Bonn, Germany. As of 1.1.2009, the Faculty of Science had appointed me as Scientific Director of SIU. Despite the word 'scientific' in the title, most of the actual work had to do with administration, bureaucracy and politics.

#### **1.2. A New Beginning**

In April 2009 the Sterrekundig Instituut Utrecht (SIU) embarked on an ambitious plan, with full support from the dean. An additional staff position was approved to reduce the heavy teaching load at the BSc level. The position was filled by Maureen van den Berg in June 2010. The MSc program was enhanced with an instrumental track and more space-related topics to attract students from technical universities, which was reflected in its expanded name: Astrophysics and Space Research. The plans for a new, common building with SRON, NOVA (Nederlandse Onderzoekschool voor de Astronomie, the federation of Dutch universities with astronomy departments) and the faculty's Scientific Instrumentation workshop started taking shape in the summer of 2009. The new building would have allowed an effective sharing of expensive machin-

ery and cleanrooms between all partners. In the fall of 2009, the Board of Utrecht University approved additional support for collaborations with SRON (Netherlands Institute for Space Research), providing SIU and IMAU (Institute for Marine and Atmospheric research Utrecht) with 340,000 Euros per year for 5 years. In January 2010 the NOVA board expressed its plan to move its Optical/IR group (10-15 FTE) to Utrecht around 2017/2018 to realize the vision of Dutch astronomy to concentrate all its optical/infrared instrumentation efforts in one place on a university campus. SIU and NOVA were also ready to implement their plan to replace Norbert Langer with a new full professor and two assistant professors, which was presented to the faculty in October 2010. Most importantly, all these plans were achievable with level funding from the university.

### 1.3. Top Astronomy in The Netherlands

Astronomy in the Netherlands is a top-scoring science. The 2010 evaluation of leading research schools reaffirmed this: NOVA and Zernike (material sciences in Groningen) were labeled exemplary, meaning above excellent. Indeed, Dutch astronomy is comparable in performance to the top US institutes. This research excellence is supported by excellence in education. SIUs research was assessed as nationally leading in its areas of expertise, internationally competitive and making a significant contribution to the field. The review committee recommended recruiting a world-leading researcher in an exciting field of astrophysics and one or two additional faculty hires at more junior levels, in agreement with SIUs plans. In terms of the facultys support of SIUs ambition, the International Review Board (IRB) noted: *The IRB was very impressed with the clear vision of the Utrecht University administration regarding the situation, and hopes that the healthy collaborative atmosphere will lead to a satisfactory resolution to the challenges facing the astrophysics group.*

## 2. The Not So Good Times

### 2.1. Veerman Report

In April 2010, the Veerman Report on Higher Education, a Report to the Ministry for Education, Culture and Research prepared by a committee of economists, managers and political scientists advised the Dutch government to not have all universities focus on the same high-priority research areas as this would cut the pie into too many pieces. The report declared that a focus on top research was very good, but to reach the top, the focus had to be coupled with choices based on proven or wished-for strengths, collaboration, and not doing everything anymore. In essence the Veerman report told the Dutch universities to not compete with each other in high-priority research areas. Astronomy, represented at five Dutch universities, could therefore be viewed as one of the topics that too many universities were involved in. This report obviously neglected the fact that certain sciences, such as astronomy, are particularly attractive for the natural and technical sciences, and that competition at the national level is a crucial ingredient for top science. Furthermore, NOVA already coordinated research to a significant extent: astronomy in the Netherlands was geographically spread out, but nonetheless quite coherent.

## 2.2. Van der Eijk & Klasen Report

In June 2010, the report by Van der Eijk and Klasen, two chemists, commissioned by the Board of Utrecht University on short notice, provided external advice on how to solve financial and other perceived problems in the faculty. The university board had obviously asked for this report as it was not convinced that the plans of the Faculty of Science would lead to a financially sound future. The report is full of factual mistakes and ill advice. Indeed, the report was so poorly written that many people, including me, simply ignored it. This may, in hindsight, have been a mistake as it looks like the university board appropriated many of the arguments in this report.

Without ever having talked to anybody in astronomy, the report suggested national coordination (*Zoek landelijke afstemming ten aanzien van de sterrenkunde, sub-atomaire fysica en theoretische fysica en vergroot bij deze onderdelen het omgevingsbewustzijn*. In English: Look for national coordination in the areas of astronomy, particle physics and theoretical physics and increase their awareness of other sciences), utterly unaware of the fact that NOVA plays exactly this role, and does so exceptionally well. Furthermore, Van der Eijk and Klasen were surprised by the small number of students compared to the size of the staff (*De adviescommissie is verrast over de relatief grote staf van het Sterrenkundig Instituut Utrecht in verhouding tot de geringe studentinstroom. De commissie adviseert verdergaande landelijke bundeling van het masteronderwijs en het onderzoek in de vorm van een sectorplan*. In English: The advisory committee is surprised by the relatively large staff of SIU in relation to the small influx of students. The committee advises further merging of national Master's education and research in the form of a national plan), totally missing the point that astronomy staff in the Netherlands are numerous because of their tremendous research success, not because the Netherlands educates so many BSc and MSc students in astronomy. Indeed, SIU most likely had more MSc students per staff than any other Dutch university with an astronomy MSc track. The committee had also missed the fact that NOVA had already provided and implemented the plan they had advised.

## 2.3. Science Faculty in Trouble

On 14 June 2010, Alfred Blik, dean of the Faculty of Science, stepped down effective immediately because his vision and ambition for the faculty was not shared by the university board. On 28 June 2010, the retired psycho-pharmacist Jan van Ree was appointed as interim-dean and stayed on until 1 January 2011, when the Utrecht chemist Gerrit van Meer became the new dean. Based on the issues raised in the report by van der Eijk and Klasen, van Ree appointed secret committees to advise him on the different institutes.

The secret committee for SIU consisted of department and faculty managers, lacking high-ranking scientists in physics or related topics, all of them having serious conflicts of interest, and the chair having shown a very negative and non-constructive attitude towards SIU. In consultation with the permanent SIU staff, I gave a presentation to the committee and provided information in writing. In the end, the committee advised that astronomy should remain in Utrecht, but that no expansion in whatever form would be possible (even if fully funded from the outside), that astronomy should be reduced in the number of research topics and that its MSc program should be a joint effort with other universities and SRON. On top of that, the committee had the audacity to advise that NOVA should financially support astronomy in Utrecht when NOVA was already providing a substantial amount of funding. This last suggestion clearly showed

that the committee had little or no understanding about NOVA, or the organization of Dutch astronomy in general. Finally, committee abused the NOVA institute rankings, obviously failing to grasp that the ranking is given on an international scale, and not (just) a national scale.

SIU objected with all means and sent a clearly-worded letter to van Ree, who actually listened to the arguments. By December 2010, an agreement (covenant) was signed by the university board and interim dean van Ree as well as dean-to-be van Meer. This agreement provided plans to restructure the faculty to reach a financially neutral result by 2015. The efforts against the recommendations of the secret committee had worked; regarding astronomy, the agreement contained the following sentences: *Astronomy will retain its current position and receive a stronger profile and Meteorology (IMAU) and Astronomy will merge in a Climate and Space research institute.* While the latter made little sense, it would not have had much of an impact except for destroying a well-known brand name.

By March 2011, van Meer had asked for a ranking of research groups by the respective department heads. Research groups were never used in Utrecht for anything, and they were indeed not well defined at all. In some cases it was a single person, in other cases it was a large part of an institute. The assessment criteria were highly subjective and non-uniform. Coupled with rampant conflicts of interest (department heads were also group leaders), these rankings led to a lot of bad blood. I do not know what the result for astronomy or for any other subject was as the results remain a secret until today. When I voiced my criticism to the dean, van Meer, he answered with the following email: *Yes, as a scientist I respect the wish of scientists to be evaluated according to a well-defined objective, quantitative procedure. In contrast, most of the decisions that I will have to take concerning which units of the faculty we will discontinue do not strictly depend on such a procedure.* This already indicated that decisions would be made based on political motives and that excellence in research and education or any other quantitative or qualitative arguments would be of little relevance.

In addition to the rankings, highly regarded scientists in the different departments were asked to provide assessments of the different institutes. In April 2011 these ambassadors provided their advise. I only saw a summary, which was favorable for astronomy: *Astrophysics bestaat uit Experimental Astrophysics en High Energy Astrophysics. Hierin is aandacht voor observatie, theoretisch sterrenonderzoek, hoge energie astrofysica en instrumentatie. De keuze voor instrumentatie is een veelbelovende trekker voor de hele groep. Voor een stevig fundament voor de toekomst moet er wel gekeken worden naar de optimale positionering van High Energy. De groep kent sterke samenwerkings-verbanden en is gekwalificeerd als landelijke toponderzoeksschool. Binnen de groep werken jonge, veelbelovende wetenschappers.* And in English: *Astrophysics consists of Experimental Astrophysics and High-Energy Astrophysics. They carry out observations, theoretical astronomy, high-energy astrophysics and instrumentation. The choice for instrumentation is a much appreciated motivator for the whole group. For a solid foundation and the future, one needs to look into how to optimally position high energy (astrophysics). The group has strong collaborative ties and is qualified as a national top research school. Young, highly acclaimed scientists are working within the group.*

Instead of revealing the decisions of the faculty board as planned on 26 May 2011, van Meer let the staff know the following: *Ik heb zojuist een gesprek gehad met het College van Bestuur over mijn voorgenomen keuzen voor het toekomstig profiel. Dit heeft*

*geleid tot nieuwe gezichtspunten die maken dat ik een aantal zaken zal moeten heroverwegen. Verdere beraadslaging is nodig om tot een zorgvuldige afweging te komen.* and in English: I just had a discussion with the university board regarding my planned choices for the future (faculty) profile. This has led to several new aspects that I need to reconsider. Further discussions are needed to come to a careful balance. My guess is that this was the time when the university board told him to ax astronomy. But I have no proof for this. Indeed, it is difficult to reconstruct what happened in the first half of 2011 as the research group assessments as well as the full ambassador reports have been kept secret.

### 3. The End

#### 3.1. The Bomb

On 8 June 2011, I was informed by the dean that the faculty wanted to stop astronomy except for some teaching at the BSc level. No quantitative or qualitative arguments were made, except for some excuses like “not the best institute in the Netherlands”, “not enough students”, and “NOVA continuation not clear”. A planned continuation of NOVA for 2013-2018 was at that time indeed not yet approved by parliament. I was told that all of this would be implemented by laying off all SIU staff and that the decision to close SIU was not firm, but that good arguments would be needed to reverse it.

I immediately informed all permanent scientific staff, NOVA, NWO (Netherlands Organisation for Scientific Research), SRON and other partners. Interventions from the highest national and international levels started flowing directly to the dean and the university board.

Utrecht University, then the university that legally represented NOVA, had decided to single-handedly withdraw from the well-coordinated system of astronomy research and education in the Netherlands without any advance consultation of any of the other stakeholders. Indeed, the legal representative of one of only two exemplary research schools in the country had decided to withdraw from the corresponding research topic without consulting any of the other partners in the research school, an act unheard of in history.

#### 3.2. Strategies

The next day, 9 June 2011, we started discussing different strategies to react to the university’s plans. We saw two options:

1. a publicity offensive to keep astronomy alive in Utrecht
2. work out a large one-time payment by Utrecht University and use the money to move the staff to other Dutch universities

The first option would have probably implied a smaller staff as vacant positions could not have been filled anymore. Furthermore, nothing would prevent the university from closing astronomy a few years later. The trust in the university was lost, and it would have been difficult to keep and attract good staff.

The second option had a number of clear advantages. It would

- provide a stimulating research environment in another location within 6 months

- minimize uncertainties for SIU staff
- make Dutch astronomy be seen as a unity
- keep the research potential at the current level in the Netherlands
- maximize the chances for NOVA continuation, considering the upcoming discussions in the Dutch parliament

Based on the clear advantages of the second solution, the SIU staff uniformly supported exploring the second option and waiting with a public outcry.

### 3.3. Closed Doors

The dean had mentioned that good arguments were needed to reverse the decision. We certainly did not wait with presenting these arguments and had them reinforced by high-level contacts at the national as well as international level. But the faculty was not willing to listen. The dean's secretary sent the following message to me on 9 June 2011: *De afspraak die we vandaag gepland hebben voor morgenochtend met Gerrit van Meer kan helaas niet door gaan. Ik heb dit al op uw voicemail ingesproken. Gerrit van Meer heeft gisteren al met Christoph besproken dat hij eerst overleg moet hebben met de rector alvorens verdere afspraken gemaakt kunnen worden..* In summary, the secretary let me know that van Meer was not available and that he could not talk to anybody before consulting the rector, one of the three members of the university board. The last sentence was incorrect in that I had not been informed previously about this, something that was indeed corrected by the dean in his email from 10 June 2011 to me: *"The sentence should have said that discussions at the level of NOVA and SRON will have to involve the rector (misunderstanding by the secretary)."*

Instead of waiting for an audience, on 10 June 2011, without an appointment, Ewine van Dishoeck (scientific director of NOVA), Wilfried Boland (executive director of NOVA) and I walked into the deans office at 08:30 in the morning and asked him to meet with us right away, to which he agreed. We pointed out the close national collaboration through NOVA and that Utrecht University had to talk to NOVA as well, in particular as Utrecht University had responsibilities and obligations as NOVA's legal representative. Furthermore, we emphasized the impact of the decision on NOVA, its credibility for future international collaborations and the impact on NOVA's chances of being continued beyond 2013.

The rector also blocked any discussion. On 10 June 2011 he wrote: *Ik heb vanmorgen laten weten dat een gesprek op dit moment niet zinvol is. Pas als het zicht op een definitief besluit wat verhelderd is, kan ik hier (vanuit mijn perspectief) zinnig over spreken. Utrecht zal bestaande verplichtingen uiteraard honoreren en in de besluitvorming betrekken. Daarbij hoort ook dat wij partners op de campus zoals SRON zo tijdig mogelijk informeren. Hierbij teken ik wel aan dat vanaf volgende week de besluitvorming via een steil traject zou kunnen verlopen, en dat een uitnodiging voor een gesprek van mijn kant (b.v. op woensdag) noodgedwongen pas op dinsdagmiddag laat bij jullie kan arriveren. Ik hoop dat jullie daar begrip voor hebben.* basically saying that discussions at this time would make no sense and that he would only be available for discussions once the decision had been finalized. This clearly indicated that the university board had no interest in hearing any arguments against the closure.

### 3.4. Respectful Divorce

On 15 June 2011, Frank Verbunt and I met with the dean, van Meer. I cite the dean from the minutes of this meeting: *Ik ben tot dit voorlopig oordeel gekomen langs de bestuurlijke weg, waarbij verschillende oordelen die over jullie groep zijn gegeven zijn meegewogen. Volgens het rapport Veerman moeten we keuzes maken en het feit dat sterrenkunde op 5 plaatsen in Nederland bestaat, heeft invloed gehad op dit voorgenomen besluit. Ik heb moeite met dit besluit en heb geen kwalitatieve argumenten.* In English: I have come to this preliminary judgement through a managerial process where various judgements made regarding your group have been considered, too. According to the Veerman report, we have to make choices and the fact that astronomy exists in 5 places in the Netherlands, influenced this preliminary decision. I have difficulties with this decision and have no qualitative arguments.

It had become crystal clear that this was a political decision, most likely by the university board and not the dean himself. In my opinion, the president of the board, Yvonne van Rooy, wanted to show the government that she was willing to take action and implement the advice of the Veerman report quickly.

I then offered the dean our plan for a respectful divorce where we would negotiate the terms of staff leaving voluntarily, given substantial concessions by the faculty. The dean agreed to trying this approach and to keep the discussions private until further notice.

On the same day, a delegation from NOVA and SRON met with the rector, Bert van der Zwaan. Wilfried Boland, Ralph Wijers from the University of Amsterdam, Roel Gathier from SRON and I learned that the university board's decision was firm and that there would certainly be no negotiations to keep astronomy and invest through appointing new staff on present, vacant positions. NOVA expressed its willingness to negotiate a respectful divorce to secure the strength of the national collaboration and keep the expertise in the country. NOVA also would secure the completion and quality of ongoing PhD theses. The meeting ended with a verbal agreement to keep things quiet and have NOVA and the faculty negotiate a respectful divorce.

### 3.5. Going Public

On 16 June 2011 the faculty made its new, preliminary profile public. The part on astronomy was very short: *"Astrophysics niet in het profiel. Vervolgscenario na landelijk overleg. Astrofysica blijft onderdeel bacheloronderwijs."* (In English: Astrophysics is not part of the (new) profile. Further developments await national consultation. Astrophysics remains part of the Bachelor education.) Interestingly, only few groups and institutes were mentioned as not being part of the profile, and the cuts in research areas at that time were far from sufficient to cover the deficit. The physics and astronomy department would also lose its solar-cell research.

In the afternoon of the same day, I held an SIU all-hands meeting to explain the events over the last week and the adopted strategy of attempting a respectful divorce. Therefore, no public actions, press releases or media events were planned.

The intention to close the Astronomical Institute in Utrecht was reported in several national newspapers, and quickly became a topic of discussion at scientific conferences. Offers of help came flooding in from all over the world, and many staff members had the difficult task of explaining their colleagues that direct, vocal action would be harmful.

During the week after the public announcement, we started to implement the first actions towards a respectful divorce. On 17 June 2011 I informed the Graduate School of Natural Sciences of Utrecht University about measures regarding teaching:

- all Bachelor students would be informed to obtain their Master's degree somewhere else,
- current Master students could finish their degree in Utrecht, and
- invoke a special rule that would allow us to hand out credits and grades outside of the regular curriculum.

On 22 June 2011 SIU issued a 'Dear Colleague' letter to the community to explain the strategy. On 23 June 2011 we organized a meeting with about 50 students where the other 4 universities presented their programs and told students that they are exempt from the normal registration deadlines.

Two weeks after the fatal, public announcement, we had taken charge of the situation, including setting the agenda for all upcoming meetings with the faculty. On 1 July 2011, Bram Achterberg, Ewine van Dishoeck and I met with the faculty. We presented 58 pages of reactions to the announcement, mostly from the international astronomical community as well as a schedule for transitioning SIU to the other NOVA institutes by the end of the year. A transition team was appointed, managed by Felix Bettonvil (paid by NOVA) and faculty personnel in finance and human resources. The faculty personnel was needed to obtain all the relevant data for planning the transition, but they were not given any information from our side.

#### **4. Transition**

On 30 September 2011, after several, sometimes frustrating, negotiations, we reached a basic agreement. Utrecht would

- pay out about 5 years of salaries for all permanent staff who would transfer
- not obtain any further funding from NOVA
- let all PhD students obtain their degree at another university
- let all equipment, computers, furniture etc. transfer to other universities at no cost
- transfer all grants including Utrecht University-funded projects and pay until the end of the project
- transfer all intellectual property of running projects at no cost
- end all teaching obligations of SIU staff by the summer 2012
- transfer the DOT to a foundation

Between October and December 2011 NOVA negotiated with other universities to find positions for all permanent scientific staff. This was a very difficult time for all staff and also their families as things were not settled until shortly before Christmas. In the end Jacco Vink was hired by the University of Amsterdam on a new position, I received



an offer from Leiden, and Heino Falcke made 4 positions in Nijmegen possible for Bram Achterberg, Frank Verbunt, Soeren Larsen, and Onno Pols. Maureen van der Berg was offered a temporary position at the University of Amsterdam. Marion Wijburg, Sake Hogeveen, and Alexander Voegler, who has unfortunately been sick for several years, will remain in Utrecht where the faculty is looking for new jobs for them.

#### **4.1. Moving**

On 13 December 2011, the first part of the institute moved to Amsterdam and Leiden. On 31 January 2012 the rest left for Nijmegen. Only the wastebaskets were left in the empty rooms. At the time of writing these sentences, the rooms were still empty. During the same timeframe, SRON decided that Amsterdam would provide a better environment for them in the future.

Only on 14 March 2012 did all 5 university boards sign the formal agreement to transfer SIU to other Dutch universities. The last accounts are being settled now.

In the end, Dutch astronomy will loose up to eight staff positions as many of the positions created by the other universities will not be structural. On the other hand, NOVA 4 was funded with 5 MEuro per year for 5 years.

#### **4.2. This Conference**

On 17 June 2011, Vanna Pugliese asked me to support the idea of a conference to honor SIU. Instead of a funeral, Vanna had the idea to celebrate the 370-year life of SIU. There was widespread support among the SIU staff, and Bram Achterberg suggested the title 370 years of Utrecht Astronomy: from beginning to end. The conference was announced to SIU staff shortly afterwards.

On 5 September 2011, the SOC was formed, co-chaired by Vanna Pugliese and Henny Lamers. The LOC was led by Marion Wijburg, who had organized many of our conferences. Funding for the conference was made by Utrecht University (we spent every last dime of the 2011 SIU budget on paying for the venue and the meals), SRON, NOVA, and the LKBF.

#### **4.3. Thanks**

First of all, I thank all my colleagues at SIU, and also their partners and families, for the amazing courage, patience and solidarity that they have shown during these trying times. Bram Achterberg and Frank Verbunt were most helpful and supportive in meetings with the faculty, in analyzing the situation and taking quick actions, and in giving priority to finding permanent positions for the young staff members over their own search for new positions. The NOVA Directorate, Ewine van Dishoeck and Wilfried Boland, was most helpful, supportive and instrumental in making this transition possible. My colleagues on the NOVA Board, Paul Groot, Thijs van der Hulst, Koen Kuijken, Reynier Peletier and Ralph Wijers worked hard on making positions available. Heino Falcke deserves special appreciation for convincing the university board in Nijmegen to give 4 SIU staff a new home. Rens Waters and Roel Gathier at SRON provided advise and support in these difficult times.

I would also like to acknowledge the tremendous support SIU received from the astronomical community in the Netherlands and all over the world. Finally, I much appreciate how the local and national press understood our need for keeping things quiet while negotiating with Utrecht University.